DESCRIPTION

In mechanical engineering the trend towards increasingly flexible solutions is leading to changes in control systems. The growth of mechatronic systems and modular functional units is placing high demands on software and its design. In the coming years, automation technology will experience the same transition that has already taken place in the PC world: a transition to more advanced and reproducible software design, simpler modification, and increasing modularity. This can only be achieved through object-oriented programming.

This book is aimed at those who want to familiarize themselves with this development in automation technology. Whether mechanical engineers, technicians, or experienced automation engineers, it can help readers to understand and use object-oriented programming.

From version 4.5, SIMOTION provides the option to use OOP in accordance with IEC 61131-3 ED3, the standard for programmable logic controllers. The book supports this way of thinking and programming and offers examples of various object-oriented techniques and their mechanisms. The examples are designed as a step-by-step process that produces a finished, ready-to-use machine module.

Contents: Developments in the field of control engineering - General principles of object-oriented programming - Function blocks, methods, classes, interfaces - Modular software concepts - Object-oriented design, reusable and easy-to-maintain software, organizational and legal aspects, software tests - I/O references, namespaces, general references - Classes in SIMOTION, instantiation of classes and function blocks, compatible and efficient software - Introduction to SIMOTION and SIMOTION SCOUT.
ABOUT THE AUTHOR

MICHAEL BRAUN is product manager for motion control engineering at Siemens in Erlangen. He communicates customers’ demands to the R&D department, pushes the implementation and introduces new software to the market.

DR. WOLFGANG HORN is software manager and developer at the IST in Chemnitz. He is intimately familiar with the architecture and programming of SIMOTION.

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